INSTALL EMERGENCY GENERATOR LANGSFORD HOUSE YOUTH CENTER Lee's Summit, MO

OWNER:

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR

PROJECT MANAGEMENT:

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**



SHEET LIST

GENERAL G000 COVER SHEET E000 ELECTRICAL GENERAL NOTES AND LEGEND E100 ELECTRICAL SITE PLAN PLUMBING P100 PLUMBING SITE PLAN



DESIGNER:

PROJECT NUMBER: H2303-01

SITE NUMBER: 7717 FACILITY NUMBER: 8877717001

HENDERSON ENGINEERS

SHEET NUMBER



ELECTRICAL SYMBOLS	
THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBR	EVIATIONS ARE USED.
ABBREVIATIONS	ANNOTATION
AF AMPERE FUSE SIZE MFR MANUFACTURER AFC ABOVE FINISHED CEILING MIN MINIMUM	(1) MECHANICAL OR FIRE PROTECTION PLAN NOTE CALLOUT
AFFABOVE FINISHED FLOORMLOMAIN LUGS ONLYAFGABOVE FINISHED GRADEMLVMAGNETIC LOW-VOLTAGEAHJAUTHORITY HAVINGMOCPMAXIMUM OVERCURRENT	1 PLUMBING PLAN NOTE CALLOUT
JURISDICTIONPROTECTIONAHUAIR HANDLING UNITMTDAICAMPERE INTERRUPTINGN/ANOT APPLICABLE	1 ELECTRICAL OR FIRE ALARM PLAN NOTE CALLOUT
CAPACITYNICNOT IN CONTRACTASAMPERE SWITCH SIZENISNOT IN SCOPEATAMPERE TRIP SETTINGNFNON-FUSED	1 TECHNOLOGY PLAN NOTE CALLOUT
ATSAUTOMATIC TRANSFER SWITCHNLNIGHT LIGHT (24HR ON) NRTLAVAUDIO VISUAL BASNRTLNATIONALLY RECOGNIZED 	1 PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED, UNO). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES
BKRBREAKEROSOCCUPANCY SENSORCCONDUITPPOLECATCATEGORYPARTPARTIAL CIRCUITCATVCABLE TELEVISION SYSTEMPH/ØPHASE	EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED, UNO)
CCTVCLOSED CIRCUIT TELEVISIONPNLPANELCDCANDELAPNLBDPANELBOARDCKTCIRCUITPROVIDE FURNISH AND INSTALLCODEAPPLICABLE CODEPTPOTENTIAL TRANSFORMER	CU MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR 1 FURNISHED AND INSTALLED, UNO)
ADOPTED BY JURISDICTIONQTYQUANTITYCTCURRENT TRANSFORMERR/RELRELOCATECTRCENTERRCPTRECEPTACLECTRLCONTROL/CONTROLLEDRLARUNNING LOAD AMPS	CONNECTION POINT OF NEW WORK TO EXISTING
CVD CUMULATIVE VOLTAGE DROP RTU ROOFTOP UNIT D/DEMO DEMOLITION SCCR SHORT-CIRCUIT CURRENT DPDT DOUBLE-POLE, RATING DOUBLE-THROW SD SMOKE DUCT DETECTOR	1 DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL E1 NUMBER LOWER NUMBER INDICATES SHEET NUMBER
DPSTDOUBLE-POLE, SINGLE-THROWSFSQUARE FEET SPDTE/ETR/EXEXISTING TO REMAINDOUBLE-THROW	SECTION CUT DESIGNATION
ECELECTRICAL CONTRACTORSPSTSINGLE-POLE, SINGLE-THROWEFEXHAUST FANSINGLE-THROWEMEMERGENCYSSBJSUPPLY-SIDE BONDING	
EMS ENERGY MANAGEMENT JUMPER SYSTEM ST SHUNT TRIP ELV ELECTRONIC LOW-VOLTAGE SWBD SWITCHBOARD	
EWCELECTRIC WATER COOLERSWGRSWITCHGEARFAAPFIRE ALARM ANNUNCIATORTBBTELECOMMUNICATIONS	
PANEL BONDING BACKBONE FACP FIRE ALARM CONTROL PANEL TBD TO BE DETERMINED FCA FAULT CURRENT AMPS TGB TELECOMMUNICATIONS AVAILABLE GROUND BUS BAR	OR [R#] P1 P1-3,5,7 [R#] P1 BRANCH CIRCUIT CONDUCTOR SIZES.
FCU FAN COLL UNIT TL TWISTLOCK FF FINISHED FLOOR TMGB TELECOMMUNICATIONS FLA FULL LOAD AMPS MAIN GROUND BUS BAR ELP FLOOP TX/XEMP TRANSFORMER	
GC GENERAL CONTRACTOR TYP TYPICAL GEC GROUNDING ELECTRODE U/F UNDERFLOOR CONDUCTOR U/G UNDERGROUND	CONDUIT CONCEALED
GESGROUNDING ELECTRODEU/SUNDERSLABSYSTEMUHUNIT HEATERGFRGROUND FAULT RELAYUNOUNLESS NOTED OTHERWISE	CONDUIT CONCEALED (EMERGENCY)
GGROUNDUPSUNINTERRUPTIBLE POWERIGISOLATED GROUNDSUPPLYISCSHORT CIRCUIT CURRENTVDVOLTAGE DROP	EXPOSED CONDUIT
JB/J-BOXJUNCTION BOXVFDVARIABLE FREQUENCYLFLINEAR FEETDRIVELRALOCKED ROTOR AMPSVSVACANCY SENSOR	EXPOSED CONDUIT (EMERGENCY) FLEXIBLE CONDUIT
LTG/LTSLIGHTING/LIGHTSWWIREMAUMAKE-UP AIR UNITW/WITHMAXMAXIMUMWPWEATHER PROOF	LOW VOLTAGE CABLE (NOT ROUTED IN CONDUIT)
MCA MINIMUM CIRCUIT AMPACITY WR WEATHER RESISTANT MCB MAIN CIRCUIT BREAKER WT WATERTIGHT MCC MOTOR CONTROL CENTER YR EYRLOSION PROOF	
	CONNECTION POINT OR EQUIPMENT TERMINATION
LINETYPE LEGEND	
THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN	BRANCH CIRCUIT CONDUCTOR TABLE
COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE	WHERE TICK MARKS ARE NOT SHOWN, THE FOLLOWING SHALL GOVERN: NEUTRAL
THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT	# OF POLES HOT (PHASE)* (GROUNDED)**GROUNDING*** 1P (1) (1) UNO (1)
INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION	2P (2) (1) UNO (1)
DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE,	
ETC.	 * PROVIDE ADDITIONAL CONDUCTORS THROUGH ENTIRE CIRCUIT (SWITCHED, UNSWITCHED/EM, ETC.) AS INDICATED THROUGHOUT CONSTRUCTION DOCUMENTS AND AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM.
EXISTING — — — — — — — — — — — — — — — — — — —	** REFER TO SPECIFICATIONS FOR LIMITATIONS ON SHARING NEUTRAL (GROUNDED) CONDUCTORS. DO NOT CIRCUIT AS A MULTI-WIRE BRANCH CIRCUIT, UNO.
NEW	*** PROVIDE ADDITIONAL ISOLATED GROUNDING CONDUCTORS WHERE INDICATED.
	REFER TO SPECIFICATIONS, PLANS, NOTES, WIRING AND CONTROL DIAGRAMS FOR ADDITIONAL CIRCUITING REQUIREMENTS.
	HATCHING LEGEND
	ENLARGED PLAN
	NOT IN SCOPE (NIS)

			V/4 00	<u>EL</u>	<u>ECTRICA</u>
POWER E	QUIPMENT	ELECTRIC	CAL ONE-LINE & RISER DIAGRAM	1.	AVOID DAM FIXTURES
	ELECTRICAL PANELBOARD (SURFACE OR FLUSH MOUNT)	│ ##A ∖ 3P	SWITCH (RATING AND POLES AS INDICATED)		OR REUSE NO EXTRA
	ELECTRICAL CABINET (SURFACE OR FLUSH MOUNT), TYPE AS NOTED PLYWOOD TERMINAL BOARD FOR TELEPHONE SYSTEM, UNO.		DRAWOUT CIRCUIT BREAKER (RATINGS, POLES, TRIP SIZE AND BREAKER TYPE AS INDICATED)	2.	WHERE AL FIXTURES, SURFACES MATCH EX
	ELECTRICAL EQUIPMENT ON HOUSEKEEPING PAD	#### 3P 日 ##AF ####	FUSED SWITCH (RATING, POLES, FUSE SIZE AND TYPE AS INDICATED)	3.	OWNER RE FLOORS/W WHERE DE
FRONT	TRANSFORMER	3P ##AF ₹ #### ₹ #### ≿ NEMA#	COMBINATION FUSED SWITCH/STARTER (RATING, POLES, FUSE SIZE, FUSE TYPE, NEMA STARTER SIZE, NEMA ENCLOSURE TYPE AS INDICATED)		CONTINUIT PROVIDE N MAINTAIN E OWNER RE
200 <u>/3/1</u> 50/3R	DISCONNECT SWITCH, 200/3/150/3R = AMPERES/POLE/FUSE/NEMA ENCLOSURE RATING CB = CIRCUIT BREAKER (200/3/CB)	- → NEMA# ##A (3P (##AT ####	CIRCUIT BREAKER (RATING, POLES, TRIP SIZE AND BREAKER TYPE AS INDICATED)	4.	PREVIOUS NEW OR TE
4	FM = FACTORY FURNISHED AND MOUNTED NF = NON-FUSED OL = SIZE INDICATED ON ONE-LINE DIAGRAM NO VALUE FOR NEMA ENCLOSURE = NEMA 1	##A 3P ##AT ####	COMBINATION CIRCUIT BREAKER/STARTER (RATING, POLES, TRIP SIZE, BREAKER TYPE, NEMA STARTER SIZE, NEMA ENCLOSURE TYPE AS INDICATED)		BEING DEM TRADES PE EQUIPMEN AND RELAT
30/3/15/1/3R	COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER, 30/3/15/1/3R = AMPERES/POLE/FUSE/NEMA STARTER SIZE/NEMA ENCLOSURE RATING CB= CIPCUIT RPEAKER (30/3/CB/1)	ונקי NEMA#	PANELBOARD, SINGLE OR MULTI-SECTION (REFER TO		FLOORS/W NOTED OT ELECTRICA CIRCUITRY
421	FM = FACTORY FURNISHED AND MOUNTED NF= NON-FUSED NO VALUE FOR NEMA ENCLOSURE = NEMA 1		ISOLATED POWER PANELBOARD W/ INTEGRAL TRANSFORMER		PLACE AND ALL POWED OTHER LIV THE TERM
₩2 VFD	MAGNETIC MOTOR STARTER, NEMA SIZE AS NOTED. 3-POLE, UNO VARIABLE FREQUENCY DRIVE	TX#	TRANSFORMER (TYPE AND RATINGS AS INDICATED)	5.	LOW VOLT, REMOVED REQUIREM
Х Ю	INDICATING LIGHT EMERGENCY POWER OFF BUTTON		SHIELDED TRANSFORMER (TYPE AND RATINGS AS INDICATED)		REUSED C
••• •••	STOP-START PUSH BUTTON CONTROL STATION HAND-OFF-AUTO PUSH BUTTON CONTROL STATION MUSHROOM-TYPE PUSH BUTTON	ATS#	TRANSFER SWITCH (RATINGS AS INDICATED) ATS = AUTOMATIC TRANSFER SWITCH MTS = MANUAL TRANSFER SWITCH NTS = NON-AUTOMATIC TRANSFER SWITCH	<u>AP</u>	PLICABLI NOTE: PRO CODES. THI WITH ALL A REQUIREMI
X	OVERHEAD PADDLE FAN		TRANSFER SWITCH WITH BYPASS (RATINGS AS INDICATED)		REQUIREMI ELECTRICA BUILDING C ENERGY CC
		480Y/277V, 3Ø, 4W ##A, 3P	GENERATOR (RATINGS AS INDICATED)	<u>EL</u>	<u>ECTRICA</u>
		=	INDICATES CONNECTION TO GROUNDING ELECTRODE SYSTEM IF GENERATOR IS CONNECTED AS A SEPARATELY DERIVED SOURCE	1.	EXISTING C DRAWINGS "AS-BUILT" TO SUBMIT WORK WITH
		MDP SWITCHBOAR	D ELEC ROOM 277V 3Ø 4W SWITCHGEAR, SWITCHBOARD AND/OR DISTRIBUTION PANELBOARD (TYPE, RATING, DEVICES AND ACCESSORIES AS INDICATED)	2. 3.	NOTIFY ARG IF ANY DAN ANY DEMOI COORDINA [®] OWNER. RE
		(AS)	AMMETER SWITCH		OWNER'S E
			VOLTMETER SWITCH	<u>EL</u>	<u>ECTRICA</u>
		AM VM	AMMETER (RANGE AS SPECIFIED OR REQUIRED) VOLTMETER (RANGE AS SPECIFIED OR REQUIRED)	1.	PRIOR TO S ACQUAINTE EXISTING U WITHIN THE
			COMBINATION DIGITAL VOLT METER/AMMETER		CRITERIA, C SPECIFICAT BE CALLED DOCUMENT
			UTILITY METER (AS REQUIRED BY UTILITY) WATT-HOUR METER, "D" DENOTES DEMAND REGISTER, "15"	2.	ALL WORK
			DENOTES MINUTES OF DEMAND INTERVAL CURRENT TRANSFORMER RATING AS SPECIFIED OR REQUIRED		EQUIPMEN AHJ ACCEP (NRTL), SUC OF THE FAC
			POTENTIAL TRANSFORMER RATING AS SPECIFIED OR	3	AND ENGIN
		ERMS	CIRCUIT/EQUIPMENT IDENTIFICATION (REFER TO SCHEDULE) ENERGY-REDUCING MAINTENANCE SWITCH	0.	NATURE AN NOT WITHIN ALL NECES BOXES AND THE FINAL I
		GFR PFR	GROUND FAULT RELAY PHASE FAILURE RELAY RHASE POTATION MONITOR	4.	OTHER TRA TO CONFOR ALL CONDU
		R R KK#	RELAY KIRK-KEY INTERLOCK (# INDICATES KEY PAIR)		DESIGN CA NOTED OTH ASSIST IN T SOLELY RE
		ST SPD	SHUNT TRIP SURGE-PROTECTIVE DEVICE	5.	ALL APPLIC CONTROLS
			VARIABLE FREQUENCY DEVICE GROUND CONNECTION	6.	FLEXIBLE C ALLOWED II CONCEALE
		● ① ● ─│!·	GROUND CONNECTION WITH TEST WELL GROUND ROD	7.	LIGHT FIXTU EXPOSED C ADJACENT
			LIGHTNING ARRESTER CAPACITOR	8.	REQUIREMI INSTALLATI WHERE PR
		$ = \neq$	CONTACT (OPEN OR CLOSED) HEATER		CONDUITS// BELOW BO OTHERWISI ELECTRICA
			MUTUR BLOCK LOAD KW OR KVA FAULT POINT REFERENCED IN SHORT CIRCUIT CURRENT AND	9.	PROVIDE IN ALL CIRCUI
			VOLTAGE DROP SPREADSHEET		

AL DEMOLITION GENERAL NOTES:

MAGING FACILITIES, INCLUDING EQUIPMENT, LIGHT AND DEVICES THAT ARE EXISTING TO REMAIN, NEW ED. REPAIR ALL DAMAGE CAUSED DURING WORK AT A COST TO THE OWNER.

LTERATION OF ELECTRICAL EQUIPMENT, LIGHT 6, RACEWAYS OR WIRING DEVICES AFFECTS EXISTING S/FINISHES: REPAIR/PAINT AFFECTED SURFACE TO XISTING ADJACENT SURFACE IN ACCORDANCE WITH REQUIREMENTS. MAINTAIN FIRE RATING OF ALL WALLS/CEILINGS THAT ARE RATED.

EMOLITION WORK INTERRUPTS ELECTRICAL ITY OF CIRCUITS THAT ARE TO REMAIN IN USE, NECESSARY DEVICES AND RELATED CIRCUITRY TO ELECTRICAL CONTINUITY IN ACCORDANCE WITH REQUIREMENTS. RECIRCUIT REUSED ELECTRICAL NT, LIGHT FIXTURES AND WIRING DEVICES SLY POWERED FROM DEMOLISHED EQUIPMENT TO TEMPORARY EQUIPMENT AS NEEDED.

ATE DISCONNECTION OF POWER TO EQUIPMENT MOLISHED/REMOVED/RELOCATED WITH OTHER PRIOR TO START OF WORK. ALL ELECTRICAL NT, LIGHT FIXTURES, RACEWAYS, WIRING DEVICES ATED CIRCUITRY NOT BEING REUSED SHALL BE D IN ALL ACCESSIBLE AREAS AND IN

WALLS/CEILINGS THAT ARE TO BE REMOVED, UNLESS THERWISE. AS ALLOWED BY OWNER, UNUSED CAL EQUIPMENT, RACEWAYS AND RELATED BY THAT ARE INACCESSIBLE MAY BE ABANDONED IN ID SHALL BE PERMANENTLY DISCONNECTED FROM ER SOURCES, INSULATED FROM CONTACT WITH VE ELECTRICAL WIRING/DEVICES, AND IDENTIFIED AT MINATIONS AS NO LONGER BEING IN SERVICE.

TAGE CABLES/WIRING NOT BEING REUSED SHALL BE D UNLESS IDENTIFIED FOR FUTURE USE. COORDINATE MENTS WITH OWNER. CARE SHOULD BE TAKEN THE REMOVAL PROCESS TO PROTECT THE EXISTING CABLES/WIRING FROM DAMAGE.

<u>E ELECTRICAL CODES:</u>

DJECT IS DESIGNED IN COMPLIANCE WITH THE FOLLOWING HIS IS NOT AN EXHAUSTIVE LIST. PROJECT SHALL COMPLY APPLICABLE CODES, STANDARDS AND LOCAL MENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL MENTS.

AL CODE: 2023 NATIONAL ELECTRICAL CODE, (NFPA 70) CODE: 2021 INTERNATIONAL BUILDING CODE CODE: 2021 INTERNATIONAL ENERGY CONSERVATION CODE

L GENERAL NOTES:

CONDITIONS WERE TAKEN FROM ORIGINAL S AND SITE VISITS AND MAY NOT REFLECT ACTUAL " CONDITIONS. VERIFY EXISTING CONDITIONS PRIOR TTING FINAL BID. COORDINATE NEW AND DEMOLITION ITH ALL OTHER TRADES AND EXISTING CONDITIONS.

RCHITECT, ENGINEER AND OWNER, AS APPLICABLE, NGEROUS CONDITIONS EXIST ON JOB SITE BEFORE DLITION OR REMODEL WORK BEGINS.

ATE ANY NECESSARY POWER OUTAGES WITH THE REQUESTS FOR ELECTRICAL SHUTDOWNS OF THE EQUIPMENT SHALL BE BROUGHT IN WRITING TO THE N OF THE OWNER AT LEAST 7 DAYS IN ADVANCE.

L SUPPLEMENTAL SPECIFICATIONS:

SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY TED WITH THE EXISTING CONDITIONS, INCLUDING THE UNDERGROUND UTILITIES ENTERING THE BUILDING THE AREA OF WORK. AS APPLICABLE, REVIEW THE OWNER GENERAL NOTES, OTHER TRADE DRAWINGS AND ATIONS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT D OUT IN THIS PORTION OF THE CONSTRUCTION ITS. NOTIFY ENGINEER OF ANY CONFLICTS OR NOCIES PRIOR TO SUBMITTING BID.

A SHALL CONFORM TO ALL LOCAL CODES AND CES AS WELL AS APPLICABLE INDUSTRY STANDARDS. ALL NT SHALL BEAR LABELS FOR THE USE INTENDED BY AN PTED NATIONALLY RECOGNIZED TESTING LABORATORY JCH AS UL OR ETL. THE FINAL ELECTRICAL INSTALLATION ACILITY OCCUPIED BY OWNER SHALL BE FREE FROM AL DEFECTS TO THE SATISFACTION OF THE AHJ, OWNER, NEER.

AL DRAWINGS ARE DIAGRAMMATIC/SCHEMATIC IN ND REPRESENT THE GENERAL SCOPE OF WORK. IT IS IN THE SCOPE OF THE ELECTRICAL DRAWINGS TO SHOW SSARY RACEWAY ROUTING, BENDS, OFFSETS, PULL ID OBSTRUCTIONS. CONTRACTOR SHALL COORDINATE . LOCATION OF EQUIPMENT AND WIRING DEVICES WITH RADES PRIOR TO INSTALLATION AND INSTALL ALL WORK DRM TO THE OWNER REQUIREMENTS.

UCTOR AND CONDUIT LENGTHS SHOWN IN THESE OCUMENTS ARE INTENDED SOLELY FOR USE IN THE ALCULATIONS BY THE DESIGN PROFESSIONAL, UNLESS THERWISE. LENGTHS SHOWN SHALL NOT BE USED TO THE BIDDING TAKEOFF PROCESS. THE CONTRACTOR IS ESPONSIBLE FOR THE MATERIAL QUANTITIES REQUIRED D CONSTRUCT THE COMPLETE PROJECT.

CABLE SWITCHES, RECEPTACLES, OUTLETS, AND S SHALL BE PLACED AT HEIGHTS THAT ARE IN NCE WITH ADA ACCESSIBILITY GUIDELINES.

CONDUIT IS ONLY PERMITTED WHERE SPECIFICALLY IN THE CONSTRUCTION DOCUMENTS, WHERE ED FROM VIEW OR EXPOSED FINAL CONNECTIONS TO TURES AND EQUIPMENT IN LENGTHS OF 6'-0" OR LESS.

CONDUIT/RACEWAY SHALL BE PAINTED TO MATCH T SURFACE, UNLESS NOTED OTHERWISE. COORDINATE MENTS WITH ARCHITECT AND OWNER PRIOR TO TION.

RACTICABLE, ALL UNDER-FLOOR/UNDER-GROUND S/RACEWAY SHALL BE INSTALLED A MINIMUM OF 24" DTTOM OF SLAB/PAVING/GRADE, UNLESS NOTED SE. NOTE: THE DESIGN INTENT FOR INSTALLING AL CIRCUITRY AT THIS DEPTH IS TO PROTECT THE AL CIRCUITRY FROM DAMAGE DUE TO FUTURE WORK.

INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR JITS, UNLESS NOTED OTHERWISE.

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



DOUGLAS M. EVERHART LICENSE # PE-2019007648

HENDERSON ENGINEERS

8345 LENEXA DRIVE, SUITE 300 LENEXA, KS 66214 TEL 913.742.5000 FAX 913.742.5001 WWW.HENDERSONENGINEERS.COM 2250005581 MO. CORPORATE NO: E-556D EXPIRES 10/31/2024

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

INSTALL EMERGENCYGENERATOR - LANGSFORDHOUSE YOUTH CENTER

525 SE 2nd St, Lee's Summit, MO 64063

PROJECT #H2303-01SITE #7717FACILITY #8877717001

REVISION:

DATE: REVISION: DATE: REVISION: DATE: ISSUE DATE: 6/16/2023

CAD DWG FILE: DRAWN BY: KS CHECKED BY: HEI DESIGNED BY: KS

SHEET TITLE: ELECTRICAL GENERAL NOTES AND LEGEND

SHEET NUMBER:

E000 2 OF 4 SHEETS 6/16/2023

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	-ECT /8" = HENDE GENE X AMBI ELE N-TIME	PRO. TI-O" PRO. STREE C PRI LAST GENER ILAST ILA	JECT NAME JECT NAME TADDRESS TADDRESS TY, ST, ZIP STORE# PROJECT # PROJECT # PROJECT # PROJECT # PARED BY TMODIFIED TATOR TYPE PARED BY TMODIFIED TATOR TYPE TATOR TATOR TYPE TATOR TYPE TATOR TYPE TATOR TYPE TATOR TYPE TATOR TYPE TATOR TYPE TATOR TYPE TATOR TATOR TYPE TATOR TATOR TYPE TATOR TATOR	LANGSFOR 525 SE 2ND LEE'S SUM STATIONAR STANDBY NATURAL G SUB-BASE 120/240V, 60 EXTERIOR O 104 F 986' N/A BASIS OF D ASSIFIED LO	D HOUSE Y ST. MIT, MO 640 BODA RY GRADE DHZ GRADE DHZ GRADE	OUTH CENTER 63		EXISTING CONC BASIS OF DESIGN 45KW NATURAL GAS GI W/ OUTPUT BRE TEMPORARY LOAD BAN RE: SPECIFICATION 2 ALTERNATES AND A INF	CRETE PAD	X FREQUENCY DIP				
1 EL 1/ MA MIN RUI	ECT 8" = HENDE GEN GEN SCAMBI ELE N-TIME	RICA 1'-0" PRO. STREE C ERSON PRI LAST GENER C GENER I LAST GENER I LAST GENER I LAST GENER VERATO GENER I LAST GENER VERATO GENER I LAST GENER VERATO GENER I LAST GENER VERATO I LAST GENER I LAST I	JECT NAME ADDRESS TADDRESS TY, ST, ZIP STORE# PROJECT # PROJECT # PROJ	LANGSFOR 525 SE 2ND LEE'S SUMP STATIONAR STANDBY NATURAL G SUB-BASE 120/240V, 60 EXTERIOR G 104 F 986' N/A BASIS OF D ASSIFIED LC	D HOUSE Y ST. WIT, MO 640 BODA BODA BODA BODA BODA BODA BODA BODA	OUTH CENTER 63 63 DR 1 GENSET DR 1 GENSET	2250005581 5/15/2023 	EXISTING CONC BASIS OF DESIGN 45KW NATURAL GAS GI W/ OUTPUT BRE TEMPORARY LOAD BAN RE: SPECIFICATION 2 ALTERNATES AND A INF	CRETE PAD	DSC (%) 10				
	ECT 8" = HENDE GEN X AMBI ELE N-TIME 1	PRO. STREE ^T C PRO. STREE ^T C ERSON PRI LASI GENER LASI C C C C C C C C C C C C C	JECT NAME T ADDRESS ITY, ST, ZIP STORE# PROJECT # PROJECT # PROJECT # PARED BY T MODIFIED ATOR TYPE DR USEAGE ATOR FUEL LOCATION T TEMP (°F) AMSL (FT) SITE FUEL CODE C CODE C CODE C	LANGSFOR 525 SE 2ND LEE'S SUMI STATIONAR STANDBY NATURAL G SUB-BASE 120/240V, 60 EXTERIOR G 104 F 986' N/A BASIS OF D ASSIFIED LC	D HOUSE Y ST. WIT, MO 640 BODA BODA BODA BODA BODA BODA BODA BODA	OUTH CENTER 63 COUTH CENTER 64 COUTH CENTER 64 COUTH CENTER 64 COUTH CENTER 64 COUTH CENTER 65 COUTH CENTER 65	2250005581 5/15/2023 5/15/2023	EXISTING CONC BASIS OF DESIGN 45KW NATURAL GAS GI W/ OUTPUT BRE TEMPORARY LOAD BAN RE: SPECIFICATION 2 ALTERNATES AND A INF	CRETE PAD	DSC (%) 10				
	-ECT /8" = HENDE GENE X-AMBI ELE X-AMBI ELE X-TIME I ELE N-TIME	PRO. STREE C PRO. STREE C ERSON PRI LAST GENER, VERATOR ENT AIF VATION W/ ON- # OI # OI # OI # OI # OI # OI # OI # OI	JECT NAME TADDRESS ITY, ST, ZIP STORE# PROJECT # PROJECT # PROJECT # PROJECT # PROJECT # PROJECT # PROJECT # I MODIFIED ATOR TUPE DR USEAGE ATOR FUEL I LOCATION TEMP (°F) I AMSL (FT) SITE FUEL TEMP (°F) I AMSL (FT) SITE FUEL CODE C O D SITE FUEL F GENSETS CODE C O D SUB SUB SUB SUB SUB SUB SUB SUB	LANGSFOR 525 SE 2ND LEE'S SUM STATIONAR STANDBY NATURAL G SUB-BASE 120/240V, 60 EXTERIOR (104 F 986' N/A BASIS OF D ASSIFIED LC ASSIFIED LC 104 F 986' N/A BASIS OF D	D HOUSE Y ST. MIT, MO 640 BODA BODA RY BAS DHZ GRADE CODA CODA CODA CODA CODA CODA CODA CODA	OUTH CENTER 63 63 COUTH CENTER 63 COUTH CENTER 64 COUTH COUTH	2250005581 5/15/2023 5/15/2023	EXISTING CONC BASIS OF DESIGN 45KW NATURAL GAS GI W/ OUTPUT BRE TEMPORARY LOAD BAN RE: SPECIFICATION 2 ALTERNATES AND A INF	CRETE PAD GENERAC ENERATOR AKER FOR IK TESTING 263213 FOR DDITIONAL ORMATION RLOA RLOA RLOA ST IN GENERATOR MAXING 20 ST IN GENERATOR DING INFORMAT	DSC WAX EREGULATION NOT SIZING A DOR SIZING A DON. REFER				
	-ECT /8" = HENDE GENE X AMBI ELE V-TIME I ELE V-TIME	RICA 1'-0" PRO. STREE C PRI LAST GENER LAST GENER LAST GENER VERATO GENER I TANK PUT VO RATOR ENT AIF VATION W/ON- # OI ENT AIF VATION W/ON- # OI ENT AIF VATION W/ON- # OI ENT AIF VATION W/ON- # OI ENT AIF VATION W/ON- # OI ENT AIF STREE C STREE ENT AIF STREE C STREE C C C C C C C C C C C C C C C C C C	JECT NAME JECT NAME T ADDRESS ITY, ST, ZIP STORE# PROJECT # PROJECT #	LANGSFOR 525 SE 2ND LEE'S SUM STATIONAR STANDBY NATURAL G SUB-BASE 120/240V, 60 EXTERIOR G 104 F 986' N/A BASIS OF D ASSIFIED LC C UDED IN THIS TOR. FINAL L MPLEMENTA	D HOUSE Y ST. MIT, MO 640 BODA BODA BODA BODA BODA BODA BODA BODA	OUTH CENTER 63 COUTH CENTER	2250005581 5/15/2023 5/15/2023 5/15/2023 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	EXISTING CONC BASIS OF DESIGN 45KW NATURAL GAS GI W/ OUTPUT BRE TEMPORARY LOAD BAN RE: SPECIFICATION 2 ALTERNATES AND A INF GENERATO	CRETE PAD GENERAC ENERATOR AKER FOR K TESTING 263213 FOR DDITIONAL ORMATION CORM	DSCEWITH NNING FULL		ECTION T TO THE LATED O		
	ECT /8" = HENDE GEN AUDI GEN AUDI GEN AUDI CUR THE IN AND C UNLES THAN CURR THE SP AUDI CUR THE SP	PRO. T-O" PRO. STREE C PRI LAST GENER. VERATOR ENT AIF VATION W/ON- # OI C RATOR ENT AIF VATION W/ON- # OI C ENT AIF VATION W/ON- # OI C ENT AIF S S S S S S S S S S S S S	L SITE I JECT NAME FADDRESS TADDRESS TY, ST, ZIP STORE# PROJECT # PROJECT #	LANGSFOR 525 SE 2ND LEE'S SUMI KYLE SVOB STATIONAR STATIONAR STANDBY NATURAL G SUB-BASE 120/240V, 60 EXTERIOR G 104 F 986' N/A BASIS OF D ASSIFIED LCC OULLY SUBJORNAL YING STATIONAR VISE, PER NEU VISE, PER NEU VISE, PER NEU VISE, PER NEU SIZING SHALL VIND LOW	D HOUSE Y ST. MIT, MO 640 BODA BODA BODA BODA BODA BODA BODA BODA	OUTH CENTER 63 63 COUTH CENTER 63 63 COUTH CENTER 63 63 COUTH CENTER 63 63 COUTH CENTER 63 63 63 63 63 63 63 63 63 63	2250005581 5/15/2023 5/15/2023 5/15/2023 3. 5/15/2023 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	EXISTING CONC BASIS OF DESIGN 45KW NATURAL GAS GI W/ OUTPUT BRE TEMPORARY LOAD BAN RE: SPECIFICATION 2 ALTERNATES AND A INF GEENERRATO	CRETE PAD GENERAC ENERATOR ENERATOR ENERATOR ENERATOR ENERATOR ENERATOR ENERATOR ENERATOR ENERATOR COMMENSION COMM		CHI AND SEL SUBJEC TO RE NEC 220 L LOAD			



RE: SHEET E000 GENERAL NOTES

EXISTING PHONE CABINET. PROTECT IN PLACE.

GENERATOR REMOTE EPO PER NEC 445.19(B) (NEW) - EXTERIOR WIREWAY (NEW) - ATS (NEW)

- EXISTING PLUMBING. PROTECT IN PLACE. RE: SHEET E000 GENERAL NOTES

RE: ELECTRICAL ONE-LINE DIAGRAM

 PROVIDE 1" UNDERGROUND CONDUIT
 WITH (3) 20A CIRCUITS FOR:
 -FACTORY-PROVIDED RECEPTACLE -BATTERY CHARGER -BLOCK HEATER PROVIDE 2-#10,1-#10G FOR EACH CIRCUIT. CONNECT EACH CIRCUIT TO NEW 20A/1P CIRCUIT BREAKERS IN PANEL LP1.



$\widehat{\alpha}$	FULL LO	DAD (R		G KVA)	L,			(7)		FULL	V2.00
AOTOR)	FULL LO	DAD (F	ATION (S)	g KVA) SYO	JIPMENT	CLES	HER	ISTING AD	OAD	FULL LOAD (KVA)	V2.00 (#)
TOR (MOTOR)	C HEATING ESISTIVE)	C (MOTORS)	RIGERATION Z AOTORS) Z	G MOTORS	IN EQUIPMENT	EPTACLES	C / OTHER	OF EXISTING AK LOAD	URE LOAD	FULL LOAD (KVA)	V2.00 (#)
ELEVATOR (MOTOR)	ELEC HEATING (RESISTIVE)	HVAC (MOTORS)	REFRIGERATION Z (MOTORS) Z	G WISC MOTORS		RECEPTACLES	MISC / OTHER	125% OF EXISTING PEAK LOAD	FUTURE LOAD	FULL LOAD (KVA)	V2.00 (#)
ELEVATOR (MOTOR)	ELEC HEATING (RESISTIVE)	HVAC (MOTORS)	REFRIGERATION Z (MOTORS) Z	G KVA) MISC MOTORS	KITCHEN EQUIPMENT	RECEPTACLES	MISC / OTHER	125% OF EXISTING PEAK LOAD	FUTURE LOAD	FULL LOAD (KVA)	V2.00 NOTES (#)
ELEVATOR (MOTOR)	ELEC HEATING (RESISTIVE)	HVAC (MOTORS)	REFRIGERATION CON CON CON CONTORN	MISC MOTORS	KITCHEN EQUIPMENT	RECEPTACLES	MISC / OTHER	62 125% OF EXISTING PEAK LOAD	FUTURE LOAD	FULL LOAD (KVA) 29	V2.00 (#) NOLES (#) N 1,2,3
ELEVATOR (MOTOR)	ELEC HEATING (RESISTIVE)	HVAC (MOTORS)	REFRIGERATION C (MOTORS) Z	G KVA) MISC MOTORS		RECEPTACLES	MISC / OTHER	62 125% OF EXISTING PEAK LOAD	FUTURE LOAD	FULL LOAD (KVA) 29 29	V2.00 (#) SBLON 1,2,3

ND APPROVAL OF THE ENGINEER OF RECORD, AUTHORITY HAVING JURISDICTION ON DOCUMENTS INCLUDING SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

/ED METHOD. NOTE THAT THE ACTUAL PEAK LOAD MAY BE SIGNIFICANTLY LESS INAL VOLTAGES AND DO NOT ACCOUNT FOR TEMPORARY STARTING IN-RUSH

W AND APPROVAL PRIOR TO ORDER. GENERATOR SUPPLIER SHALL BE ST SYSTEM, ENCLOSURE, FUEL TANK, GAUGES AND STARTER IN ACCORDANCE SMIC DESIGN CATEGORY. DE-RATE GENERATOR AND PROVIDE NECESSARY

EVALUATION. REFER TO SPECIFICATIONS FOR ALLOWED STEADY-STATE

HALL HAVE CAPACITY SUFFICIENT TO SUPPLY THE MAXIMUM LOAD THAT WILL BE

ELECTRICAL ONE-LINE DIAGRAM - DEMOLITION NTS

E3

UTILITY PRIMARY

(M)

E3

UTILITY TRANSFORMER 120/240V 1Ø 3W (ETR) (POLE MOUNTED) FAULT CURRENT: 10,000AIC



5 ELECTRICAL ONE-LINE DIAGRAM - NEW NTS

ELECTRICAL PLAN NOTES:	MICHAFI I PARSON
RELOCATE EXISTING PANELBOARDS (ROTATE 180 DEGREES) TO BE ACCESSIBLE FROM EXTERIOR CLOSET. RECONNECT EXISTING FEEDER(S), BRANCH CIRCUITRY, AND GROUNDING AS REQUIRED. UTILIZE EXISTING TO MAXIMUM EXTENT POSSIBLE. PROVIDE NEW WHERE REQUIRED. PROVIDE NEW DRYWALL, PATCH AND MUD WHERE PANELBOARDS WERE REMOVED WITHIN CLOSET. REPAIR WALL TO OWNER SATISFACTION. PAINT WALL TO MATCH SURROUNDING WALL COLOR. REFER TO SPECIFICATION 260010 FOR ADDITIONAL INFORMATION.	GOVERNOR GOVERNOR
CONTRACTOR SHALL PROVIDE A 6'-0" TALL GALVANIZED STEEL CHAIN LINK FENCE AROUND THE GENERATOR CONCRETE PAD. FENCE POSTS SHALL BE INSTALLED AT A MAXIMUM SPACING OF 8 FEET AND SHALL BE SECURELY ANCHORED IN CONCRETE FOOTINGS. INSTALL PER MANUFACTURER'S INSTRUCTIONS. FENCE SHALL HAVE A 6'-0" WIDE LOCKABLE GATE FOR ACCESS TO THE GENERATOR. COORDINATE FINAL FENCE SELECTION AND OPTIONS WITH OWNER PRIOR TO ORDERING. MAINTAIN 4'-0" CLEARANCE AROUND ALL SIDES OF GENERATOR FOR ACCESS AND MAINTENANCE.	NUMBER PE-2019007648 S/ONAL ENG DOUGLAS M. EVERHART LICENSE # PE-2019007648
EXISTING NEUTRAL-GROUND BONDS WITHIN PANEL SHALL BE BROKEN AND RE-CONNECTED TO NETURAL-GROUND BOND LOCATION WITHIN NEW SERVICE ENTRANCE RATED ATS.	
SITE ELECTRICAL GENERAL NOTES:	HENDERSON
1. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. COORDINATE THE FINAL LOCATION OF ALL UNDERGROUND UTILITIES, CONDUITS, AND CIRCUITRY WITH OWNER AND OTHER TRADES PRIOR TO INSTALLATION.	8345 LENEXA DRIVE, SUITE 300 LENEXA, KS 66214 TEL 913.742.5000 FAX 913.742.5001 WWW.HENDERSONENGINEERS.COM
2. COORDINATE ALL SITE ELECTRICAL REQUIREMENTS WITH EQUIPMENT MANUFACTURER INFORMATION AND OTHER TRADES AND ADJUST ELECTRICAL PROVISIONS AS REQUIRED TO MEET REQUIREMENTS.	2250005581 MO. CORPORATE NO: E-556D EXPIRES 10/31/2024
 SITE ELECTRICAL CONDUITS SHALL BE 1" MINIMUM, UNLESS NOTED OTHERWISE. WHERE PRACTICABLE, ALL SITE ELECTRICAL CONDUITS SHALL BE INSTALLED A MINIMUM OF 24" BELOW GRADE, UNLESS NOTED OTHERWISE. COORDINATE FINAL CONDUIT ROUTING WITH EXISTING OBSTRUCTIONS AND OTHER TRADES AND ADJUST AS NECESSARY. 	
ONE-LINE DIAGRAM GENERAL NOTES:	
 FEEDER SIZES ARE BASED ON COPPER (CU) THHN/THWN-2 INSULATION UNLESS NOTED OTHERWISE. CONDUIT SIZES SHOWN ARE APPROPRIA FOR SCHEDULE 40 PVC, EMT, GRS, IMC AND RMC; ADJUST SIZE AS NEEDED FOR OTHER RACEWAY TYPES. ALL CONDUCTOR SIZES ARE BASED ON 75 DEG C RATED TERMINATIONS, UNLESS NOTED OTHERWI FOR ANY OTHER CONDITIONS MODIFY SIZES PER CODE. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. 	N, TE SE.
2. INSTALL FEEDERS OVERHEAD AS HIGH AS PRACTICABLE AND ORTHOGONALLY ALONG BUILDING STRUCTURE, UNLESS NOTED OTHERWISE. COORDINATE FINAL ROUTING WITH OTHER TRADES.	
3. VERIFY THE INTEGRITY OF THE EXISTING GROUNDING ELECTRODE SYSTEM AND THAT THE NEUTRAL AND GROUND ARE PROPERLY BOND TOGETHER AT THE POINT OF SERVICE ENTRANCE. NOTIFY THE OWNE AND THE ENGINEER OF ANY EXISTING DEFICIENCIES	
ELECTRICAL UTILITY CONTACT NOTE:	DIVISION OF FACILITIES
UTILITY COMPANY: EVERGY UTILITY CONTACT: JANET WADDELL EMAIL: JANET WADDELL @EVERGY COM	MANAGEMENT, DESIGN AND CONSTRUCTIO

INSTALL EMERGENCY GENERATOR - LANGSFORD HOUSE YOUTH CENTER

525 SE 2nd St, Lee's Summit, MO 64063

PROJECT # H2303-01 SITE # 7717 FACILITY # 8877717001

REVISION:

DATE REVISION DATE REVISION DATE: ISSUE DATE: 6/16/2023

CAD DWG FILE: DRAWN BY: KS CHECKED BY: NS DESIGNED BY: KS

SHEET TITLE:

ELECTRICAL SITE PLAN

SHEET NUMBER:

E100 **3 OF 4 SHEETS** 6/16/2023

- METER #: 18 107 004 **CONTACT EVERGY NO LATER THAN 7 DAYS PRIOR TO
- PEAK LOAD = 23KW IN JUNE 2022 PER EVERGY UTILITY

FEEDER SCHEDULE:

FEEDER TAG	FEEDER DESCRIPTION
203	(3)#3/0, (1)#6 G, 2" C
403A	(3)-500 kcmil, (1)#3 G, 3" C
DEMO	DEMOLISH FEEDER
EX	EXISTING FEEDER
G2	#2 COPPER GROUND, 3/4" C
G6	#6 COPPER GROUND, 3/4" C
G10	#1/0 COPPER GROUND, 3/4" C
MBJ	#2 MAIN BONDING JUMPER
S403A	(3)-500 kcmil, 3"C

PLl	JMBING SYN	1BOI	_S				
THIS IS	S A MASTER LEGEND AN		ALL SYMBOLS OR ABBR	EVIATIONS	ARE US	SED.	
ANNO	TATION			PIPING S	YMBOL	S	
1	PLUMBING PLAN NOTE C	ALLOUT		Þ	۲	FLOOR SINK	(FS), SIZE & TYPE
					igodol	FLOOR DRAI	N (FD), SIZE & TYPE
) FURNISHED AND INSTALL	ESIGNATIC ED). REFE	R TO PLUMBING FIXTURE	ļ (<u>D</u> i	ROOF DRAIN	(RD), SIZE & TYPE
	OR EQUIPMENT SCHEDU	LES		│ ───⊳	⊲	- SHUTOFF VA	LVE
	EQUIPMENT DESIGNATIO	N (OWNER	FURNISHED,	r	▶	- CHECK VALV	E
	CONTRACTOR INSTALLEL))		+	y l	- STRAINER	
	MECHANICAL EQUIPMEN	TION (CONTRACTOR		§	- GAS PRESSU	IRE REGULATOR	
1/	FURNISHED AND INSTALL	ED UNLES	S NOTED OTHERWISE)		3	CAP	
\bullet	CONNECTION POINT OF N	NEW WORK	K TO EXISTING		 >⊣	WALL CLEAN	OUT (WCO)
				0	Ð	FLOOR CLEA	NOUT (FCO)
(P1)	NUMBER LOWER NUMBE	ER NUMBE R INDICATE	ES SHEET NUMBER		ס	EXTERIOR C	LEANOUT (ECO)
					ю	ELBOW UP	
P1	SECTION CUT DESIGNATI	SECTION CUT DESIGNATION				ELBOW DOW	Ν
\bigotimes	DEDICATED EQUIPMENT	ACCESS TI	LE		Э н	- TEE UP	
∇	ACCESS PANEL						
	AUGEUUTANEE			+	Ŧ	- GAS COCK	
ABBRE	VIATIONS			PIPING LINETYPES			
ADA	AMERICANS WITH	MIN	MINIMUM			DOMESTI	C COLD WATER (CW)
AFF	DISABILITIES ACT	N/C N/O	NORMALLY CLOSED			DOMESTI	C HOT WATER (HW)
AFG	ABOVE FINISHED GRADE	NIC			-HWR		C HOT WATER RECIRC. (HWR)
AP	ACCESS PANEL	PDI	PLUMBING DRAINAGE		–140°—	DOMESTIC	C HOT WATER (140°)
BEE	SYSTEM	PH/Ø	PHASE PRESSURE REDUCING		—s——	SOIL PIPIN	IG - ABOVE FLOOR (S)
BFG	BELOW FINISHED GRADE	PVC			—s— ·	SOIL PIPIN	IG - BELOW FLOOR (S)
BOS	BOTTOM OF STRUCTURE	RCP	REINFORCED CONCRETE		ST	STORM D	RAIN - ABOVE FLOOR (ST)
CP CPVC	CONDENSATE PUMP	RD RPM	ROOF DRAIN REVOLUTIONS PER		- ·st· —	- STORM D	RAIN - BELOW FLOOR (ST)
	CHLORIDE	RTU	MINUTE ROOFTOP LINIT		-ost	OVERFLO	W STORM DRAIN - ABOVE FLOOR (OST)
		SF	SQUARE FEET		—G——		GAS (G)
DFU DS	DRAINAGE FIXTURE UNIT	SS	STAINLESS STEEL SANITARY SEWER, SOIL		-MPG	MEDIUM F	PRESSURE NATURAL GAS (MPG)
(E) EMS	EXISTING ENERGY MANAGEMENT	TDH	STACK TOTAL DYNAMIC HEAD		V	VENT PIPI	NG (V)
ETR	SYSTEM EXISTING TO REMAIN	TFA TFB	TO FLOOR ABOVE TO FLOOR BELOW	LINETYPE	ELEGE	ND	
EWC		TYP	TYPICAL	THROUGHO			
FFA	FROM FLOOR ABOVE		LABORATORIES, INC.	COMBINATIO		THE SYMBOLS TO	INDICATE THE STATUS OF ITEMS AS
FFB FF	FINISHED FLOOR	UNU	OTHERWISE	AND/OR ITE	MS WHICH	H ARE ANTICIPATI	ED TO BE PROVIDED IN THE FUTURE.
FL FLA	FLOW LINE FULL LOAD AMPS	UPS	UNINTERRUPTIBLE POWER SUPPLY	VIEW IN WH	S OF ITEM ICH THEY	S USING THESE L APPEAR. PHASII	INETYPES ARE RELATIVE TO THE
FLR GPM	FLOOR	VCP VED	VITRIFIED CLAY PIPE	INTENDED T	O FULLY	DESCRIBE ALL NE	ECESSARY CONSTRUCTION PHASING,
HD	HEAD, HUB DRAIN	Ve		RESPONSIB	ILITIES. A	NY SUCH PHASES	DESCRIBED IN THE CONSTRUCTION
HZ IE	INVERT ELEVATION	VS VTR	VENT THROUGH ROOF	ORDER FOR	THE SAK	E OF DESCRIBIN	G THE PROJECT. THE FOLLOWING
IN WC JB	INCHES OF WATER COLUMN JUNCTION BOX	W/ W/O	WITH WITHOUT	ETC.	MAY BE U	SED ON ANY DEV	ICE, EQUIPMENT, NOTE, LINE, SHAPE,
J-BOX KW	JUNCTION BOX KILOWATT	WC WS	WATER COLUMN WASTE STACK				
MAU	MAKE-UP AIR UNIT	WSFU	WATER SUPPLY FIXTURE	EXISTING -			NEW
MBH MH	1000 BTU PER HOUR MANHOLE	WVS	WASTE VENT STACK	DEMOLISH-			FUTURE

TOTAL CONNECTED NATURAL GAS LOAD								
EQUIPMENT DESIGNATION	DESCRIPTION		CFH (EACH)					
F-1	FURNACE (EXISTING)		66					
F-2	F-2 FURNACE (EXISTING)							
F-3	F-3 FURNACE (EXISTING)							
F-4	F-4 FURNACE (EXISTING)							
IWH-1	INSTANTANEOUS WATER HEATER	R (EXISTING)	160					
IWH-2	INSTANTANEOUS WATER HEATER	R (EXISTING)	160					
	GENERATOR		23					
		TOTAL CONNECTED LOAD =	563					
NATURAL GAS SYSTE	7 IN W.C							
NATURAL GAS SYSTEM	I SIZED WITH TOTAL DEVELOPED LENGTH FROM							
GAS METER TO MOST	REMOTE PIECE OF EQUIPMENT:		150 FEET					
SYSTEM DESIGN PRES	SSURE DROP:		0.5 IN. W.C.					



6/16/2023

